indicative of the degree of adherence to the [patient] tissue of the return electrode.

21. (Amended) The electrosurgical generator of claim 16, wherein the microprocessor includes an algorithm for subtracting the cooling factor from the heating factor to calculate a difference value, and the generator further comprises a comparator electrically connected to the microprocessor for comparing the difference value to a threshold value, the comparator being electrically connected to the controller to generate a first signal indicative of the relationship of the difference value and the [predetermined] threshold value.

22. The electrosurgical generator of claim 21, further comprising an alarm electrically connected to the comparator for generating a warning signal if the difference value exceeds the threshold value by a predetermined amount.

23. (Amended) The electrosurgical generator of claim [22] 21, wherein the controller generates a shut off signal to terminate power if the difference value exceeds a predetermined value, the predetermined value being greater than the threshold value.

24. The electrosurgical generator of claim 23, wherein the controller generates a second signal to reduce the power if the difference value exceeds the threshold value but does not exceed the predetermined value.

Remarks

Claims 16-24 remain in the application.

The Examiner has indicated that claims 17-24 would be allowable if rewritten to include the limitations of the base claim and any intervening claims. Applicant wishes to express his appreciation for the indication of allowability. However, Applicant believes that claim 16 as amended is patentable as it stands.

The specification has been amended to correct a typographical error. The description of the cooling algorithm on page 7 is now consistent with the description on page 10.

Claims 16 and 18-21 have been amended to provide correct antecedent

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basis. Claims 19 and 23 have been amended to correct their dependencies.

Claim 16 was rejected under 35 USC §112, first paragraph, as containing subject matter that was not described in the specification in such a way as to convey to one skilled in the art that the inventor had possession of the claimed invention. Specifically, the specification was cited as not teaching or suggesting a heating factor as $K_c I^2 t_{on}$ or a cooling factor as $K_h t_{off}$. Claims 18 and 19 now correctly describe first algorithm for calculating the heating factor as $\mathbf{K_h} I^2 t_{on}$ and the second algorithm for calculating the cooling factor as $\mathbf{K_c} t_{off}$ consistent with the specification on pages 9 and 10.

Claims 16-24 were rejected under 35 USC §112, second paragraph, as being indefinite. Claim 16 was rejected because the Examiner found its scope unclear. Claim 16 now more clearly defines the scope of claim 16 as drawn to an electrosurgical generator, a return electrode, and an impedance sensor.

Claim 16 was rejected under 35 USC § 102(b) as being anticipated by Harris et al. (US Patent No. 4,658,819).

Claim 16 provides an electrosurgical system comprising an electrosurgical generator, a return electrode, and an impedance sensor. The impedance sensor is in electrical communication with the return electrode to measure impedance of the return electrode. The electrosurgical generator further comprises a current sensor, a microprocessor, and a controller. The current sensor measures an output current delivered by the electrosurgical generator. The microprocessor is connected to the current sensor and the impedance sensor and calculates a heating factor and a cooling factor of the tissue under the return electrode. The calculation of the heating factor is based at least in part on the measured output current. The controller is connected to the microprocessor for adjusting a power supply of the generator in response to a relationship of the calculated heating and cooling factors.

Harris et al. is directed toward an electrosurgical generator, which includes circuitry for decreasing the output power with increasing patient impedance. Harris et al. senses the current and voltage supplied at the output of the electrosurgical generator and calculates the impedance of the entire load as seen by the

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electrosurgical generator.

Harris et al. clearly fails to teach or suggest a microprocessor which calculates a heating factor and a cooling factor of the tissue under a return electrode as set forth in claim 16. In addition, there is no teaching in Harris et al. of a controller, for adjusting a power supply of the generator in response to a relationship of the calculated heating and cooling factors, also as set forth in claim 16.

Applicant therefore submits that claim 16 is not anticipated or rendered obvious by Harris et al.

For these reasons, reconsideration of the rejected claims, withdrawal of the rejections, and allowance of the claims are respectfully requested.

Respectfully submitted,

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Date

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